

ABSTRACT

A lithium secondary battery using a lithium manganese oxide for a positive active material having a cubic spinel structure which has a crystallite size of 58 nm or greater and/or a lattice distortion of 0.09% or less. The ratio of Li/Mn in the lithium manganese oxide is preferably greater than 0.5. In synthesizing the lithium manganese oxide, a mixed compound including salts and/or oxides of each of the elements is fired in an oxidizing atmosphere in a range of 650°C to 1000°C for 5 to 50 hours, with the properties of the crystal being improved by firing two or more times, preferably with an increase in firing temperature over the temperature of the previous firing.